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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,797	01/27/2004	Geert Deroover	226135	2587

23460 7590 03/24/2005

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EXAMINER	
HAMILTON, CYNTHIA	

ART UNIT	PAPER NUMBER
1752	

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/765,797	DEROOVER ET AL.	
	Examiner	Art Unit	
	Cynthia Hamilton	1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/27/05*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☒ Claim(s) *30-35* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *01/27/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The disclosure is objected to because of the following informalities: Applicants need to correct in the first paragraph of the specification as shown below the reference to "SepteFebruary" in the second line. The correct month is February.

> This application claims the benefit of U.S. Provisional Application No. 60/444,470 filed SepteFebruary 03, 2003, which is incorporated by reference. In addition, this application claims the benefit of European Application No. 03100154.8 filed January 27, 2003, which is also incorporated by reference.

Appropriate correction is required.

2. Claims 30-35 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim *should refer to other claims in the alternative only*. See MPEP § 608.01(n).

a. Claim 30 is dependent upon claim 27 and 8 concurrently.
b. Claim 31 is dependent upon claim 28 and 8 concurrently.
c. Claim 32 is dependent upon claim 29 and 8 concurrently.
d. Claim 33 is dependent upon claim 30 and 8 concurrently.
e. Claim 34 is dependent upon claim 31 and 8 concurrently.
f. Claim 35 is dependent upon claim 32 and 8 concurrently.

Accordingly, the claims have not been further treated on the merits.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: On page 4, lines 13-14, applicants in their disclosure rely upon the claims to support the material. The specification is to support the claims and not the reverse.

Applicants need to add the disclosure set forth to the specification at this point or point to where the disclosure is in the specification and use appropriate wording at this point on page 4 to point to it. Amending the claims in any fashion as to introduce issues of lack of original disclosure in reference to this limitation in the specification will also act to cause consideration of new matter being added to the specification. **The examiner suggests applicants place all of original claims in question into the body of the specification and remove reference to claims on page 4 to remove this problem.**

4. Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1 at lines 6-10 is found the following:

> second layer comprising a water-repellent compound selected from the group consisting of
>
> - a polymer comprising siloxane and/or perfluoroalkyl monomeric units, and
> - a block- or graft-copolymer comprising a poly- or oligo(alkylene oxide) and a polymer or oligomer comprising siloxane and/ or perfluoroalkyl monomeric units,

Because of the dashes, the claim language does not clearly distinguish three or two polymers. Are there three polymers from which to select the water-repellant compound or two? The first polymer is 1) a polymer comprising siloxane and/or perfluoroalkyl monomeric units. The second polymer is 2) a block or graft-copolymer comprising a poly- or oligo (alkylene oxide). The third polymer is 3) a polymer or oligomer comprising siloxane and/or perfluoroalkyl monomeric units. If there are only two polymers, as the dashes would indicate, then, the second polymer is 2) a block or graft-copolymer comprising a poly- or oligo (alkylene oxide) and a

polymer or oligomer comprising siloxane and/or perfluoroalkyl monomeric units. This second polymer is not described as a single polymer but two polymers. There is no indication how they become one polymer. The examiner notes, at page 5, lines 14-15, the second polymer is described as "block- or graft-copolymers comprising a poly- or oligo (alkylene oxide) block and a block of poly- or oligosiloxane and/or perfluoroalkyl units." The use of "block" on page 5 makes clear that a single copolymer is being described. Such language in claim 1 would clarify that two polymers were meant. If applicants intend three polymers to be described in claim 1 then they need to use a third dash to make such clear to one of ordinary skill in the art. The limits of claims 1-29 are held vague for this reason. **Suggestions to remove above issues under 35 USC 112: The examiner suggests such wording for claim 1 to reflect that found on page 5 addressed above.**

5. Claims 24 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 24 and 27 are dependent upon claim 4. The printing plate precursor of claim 4 limits the infrared light absorbing dye to one which has at least one perfluoroalkyl group covalently linked thereto and at least one perfluoroalkyl group containing 6 or more fluorine atoms as part of a counter ion. Thus, the infrared light absorbing dye of claim 4 must have two perfluoroalkyl groups. The dye must have a counter ion as well. The structure given in claim 24 is not so limited. The counter ion X in the precursor of claim 24 is optional and not limited to being comprised of a perfluoroalkyl group containing 6 or more fluorine atoms. There is no requirement that a perfluoroalkyl group be covalently bonded to the dye, i.e. a perfluoroalkyl group contained in at least one of A^1, A^2, R^1 to R^{11}. Thus, whether the precursor

of claims 24 and 27 is entirely encompassed within the precursor set forth in claim 4 is unclear due to the broader language set forth in claim 24 in describing the infrared light absorbing dye. Thus, the limits of the invention of claims 24 and 27 are unclear. **Suggestions to remove above issues under 35 USC 112 in this rejection: The examiner suggests such wording for claim 24 with respect to X as to remove "optional in lines describing X and with respect to the last line remove X and place "or" before R^1.**

6. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 25 is dependent upon claim 2. The printing plate precursor of claim 2 limits the infrared light absorbing dye to one which has at least one perfluoroalkyl group covalently linked thereto. The structure given in claim 25 is not so limited. There is in claim 25 no requirement that a perfluoroalkyl group be covalently bonded to the dye, i.e. a perfluoroalkyl group contained in at least one of A^1, A^2, R^1 to R^{11}. Thus, whether the precursor of claim 25 is entirely encompassed within the precursor set forth in claim 2 is unclear due to the broader language set forth in claim 25 in describing the infrared light absorbing dye. Thus, the limits of the invention of claims 24 and 27 are unclear. **Suggestions to remove above issues under 35 USC 112 in this rejection: The examiner suggests such wording for claim 24 with with respect to the last line remove X and place "or" before R^1.**

7. Claims 26 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 26 and 29 are dependent upon claim 3. The printing plate precursor of claim 3 limits the infrared light absorbing dye to one which the infrared light

absorbing dye carries a charge and the perfluoroalkyl group is comprised in a counter ion and contains at least 6 fluorine atoms. Thus, the infrared light absorbing dye of claim 3 must carry a charge and have a counter ion containing at least 6 fluorine atoms in a perfluoroalkyl group. The structure given in claim 26 is not so limited. The counter ion X in the precursor of claim 26 is optional and not limited to being comprised of a perfluoroalkyl group containing 6 or more fluorine atoms. Thus, whether the precursor of claims 26 and 29 is entirely encompassed within the precursor set forth in claim 3 is unclear due to the broader language set forth in claim 26 in describing the infrared light absorbing dye. Thus, the limits of the invention of claims 26 and 29 are unclear. **Suggestions to remove above issues under 35 USC 112 in this rejection: The examiner suggests such wording for claim 26 (1) with respect to X as to remove "optional" in lines describing X and (2) require the dye to carry a charge and (3) remove the proviso of last three lines or, in the alternative, limit the proviso to X.**

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-3, 5-10, 12-13, 15-16, 18-20, 22-23, 25-26, and 28-29 are rejected under 35 U.S.C. 103(a) as being obvious over McCullough et al (WO 99/21725) in view of Nakamura (EP 1 162 078 A2). With respect to applicants' claims 1-3, 5-10, 12-13, 15-16, 18-20, 22-23, 25-26, and 28-29, McCullough et al teach all applicant's plates with respect to the top layer being comprised of a siloxane polymer being in the top layer. i. e. in the second layer, with the exception that the infrared absorbing dye comprises at least one perfluoroalkyl group.

McCullough et al in page 12 teaches the formation of a surface layer because of the addition of

> Said heat sensitive composition and said developer resistance means of said precursor may not necessarily, together, define a single homogeneous layer. Said precursor may include at least some developer resistance means at or towards an upper surface thereof.
>
> Whilst the applicants do not wish to be limited by any theoretical explanation of how their invention operates, it is believed that the presence of at least part of the developer resistance means at an uppermost surface of the precursor may be a key factor. Thus, preferably, the precursor includes an upper surface (which is suitably contacted by developer during development) which includes some of said developer resistance means. Such a surface may be a component of a layer which also includes said heat sensitive composition. In this case, the precursor may be prepared using a mixture comprising said heat sensitive composition and said developer resistance means. It is believed that, at some stage, at least part of the developer resistance means separates from the heat sensitive composition and migrates to the surface. Thus, resistance to developer attack appears to be manifested particularly at the surface of precursors of the present invention. Dynamic contact angle studies

the siloxane prescuror being present.

Continuing on page 13:

- 13 -

(using a Cahn Dynamic Contact Angle Analyzer) have clearly showed a marked effect at the surface of precursors described herein. For example, a typical positive working lithographic printing plate precursor has advancing and receding contact angles in water of approximately 95° and 48° respectively, whereas a precursor comprising a heat sensitive composition and a developer resistance means of, for example, a phenyl methyl polysiloxane (applied to the substrate as a mixture) has advancing and receding contact angles in water of approximately 95° and 67° respectively. A surface of the same phenyl methyl polysiloxane alone provided on the same substrate has advancing and receding contact angles in water of approximately 95° and 67° respectively. Thus, the surface of the precursor is of a nature similar to that of the polysiloxane coated as a single component.

generally disclose their IR absorbing dyes with disclosure that the dye is to be concentrated in or near the second layer of their plates. Nakamura teaches the use of a perfluoroalkyl infrared dye that allowed surface orientation because of the perfluoro group on the dye. The reasons for adding this dye instead of less compatible dyes is found the following paragraphs in Nakamura:

Field of the Invention

[0001] The present invention relates to a positive or negative image-formation material which can be recorded image-wise by exposure to an infrared laser and in which solubility of a recording layer at exposed portions changes, and to an infrared absorber which can be suitably used in the image-formation material. More particularly, the present invention relates to an image-formation material with an infrared layer, which can be recorded by exposure to an infrared laser or the like in the near-infrared range, and particularly which is suitable for a planographic printing plate used for so-called direct plate formation which can provide plate formation directly from digital signals of computers and the like, and to an infrared absorber having a surface orientation group, which absorber is suitable for application in the image-formation material.

[0006] Regarding image-forming properties of the above-mentioned various recording materials, there is a problem in that, although energy sufficient for an image formation reaction is obtained at the surface of a sensitive material irradiated by a laser, thermal diffusion to a substrate is extensive, due to excellent thermal diffusion, and particularly due to excellent heat conductivity when a generally-used aluminum substrate is used as the substrate. Consequently, energy is not sufficiently utilized for forming images, leading to low sensitivity. With this problem, a sufficient effect of reducing suppression of dissolution or an effect of promoting a reaction by polymerization may not be obtained in deep portions of the sensitive material. Consequently, the occurrence of alkali development at exposed portions/non-exposed portions may not be fully realized, such that excellent images cannot be obtained, and furthermore, developing latitude, that is, tolerable range which can afford good image-formation when concentration of an alkaline developing solution is varied, is narrow.

SUMMARY OF THE INVENTION

[0007] Therefore, an object of the present invention is to provide an image-formation material having high sensitivity and excellent image-forming property, and a novel infrared absorber which can be suitably used in this material.
[0008] The present inventor has intensively studied for the purpose of improving sensitivity and image-forming property of image-formation materials, and has consequently found that both sensitivity and image-forming property can be improved by using an infrared absorption agent having a specific substituent. Further, the inventor has found a novel infrared absorber that can be suitably used in this agent, leading to completion of the present invention.
[0009] That is, the image-formation material of the present invention is a heat mode-applicable image-formation

material, the image-formation material having: a substrate; and an image-formation layer on the substrate which contains an infrared absorption agent having at least one surface orientation group in a molecule thereof, solubility of the image-formation layer in an alkaline aqueous solution being changeable by action of near-infrared range radiation.
[0010] Here, in a preferable embodiment, the above-mentioned infrared absorption agent is an infrared absorber having at least one surface orientation group selected from fluorine-containing substituents and long chain alkyl groups.
[0011] Further, the infrared absorber of the present invention is characterized in that it has in the molecule a fluorine-containing substituent having at least 5 fluorine atoms.

[0025] Although action of the present invention is not clear, it is believed that by using an infrared absorber which manifests absorption in the near-infrared range and has a surface orientation group as the infrared absorption agent to be used in the image-formation material of the present invention, an infrared absorption agent is localized on the outermost surface (air interface) of a photosensitive layer. Thus, diffusion of heat generated near the surface into a substrate is suppressed, and the generated heat is utilized efficiently for forming images. Consequently, an increase in sensitivity can be attained.
[0026] Further, from the investigations of the present inventor, it is apparent that when a resin layer containing an infrared absorber having a surface orientation group is irradiated by an infrared laser, the surface contact angle of the resin layer increases. Resultantly, in the image-formation material of the present invention, permeability of a developing solution at exposed portions of the image-formation layer lowers. Therefore, particularly in the case of use as a negative

recording material, there is also a benefit in that discrimination can be expanded.

Thus, with respect to instant claims 1-3, 5-10, 12-13, 15-16, 18-20, 22-23, 25-26, and 28-29, the use of the perfluorinated infrared absorbers of Nakamura as the IR absorbers of McCullough et al would have been prima facie obvious to suppress the heat diffusion near the surface of the printing plate surface thus using the generated heat more efficiently for forming images and consequently getting an increase in sensitivity and the oleophilic nature of the fluoro groups would have been attracted to the siloxane structure. The specific examples of Nakamura's dyes are found on pages 7-11.

10. Claims 1-3, 5-10, 12-13, 15-16, 18-20, 22-23, 25-26, and 28-29 are rejected under 35 U.S.C. 103(a) as being obvious over Veermsch et al (EP 1 256 444 A1) in view of Nakamura (EP 1 162 078 A2). With respect to applicants' claims 1-3, 5-10, 12-13, 15-16, 18-20, 22-23, 25-26, and 28-29, Veermsch et al teach all applicant's plates with respect to the top layer being comprised of a polymer that is a block or graft-c0-polymer comprising (i) a poly (alkylene oxide) block and (ii) a block comprising siloxane and/or perfluorohydrocarbon units. in the second layer, with the exception that the infrared absorbing dye comprises at least one perfluoroalkyl group. Nakamura teaches the use of a perfluoroalkyl infrared dye that allowed surface orientation because of the perfluoro group on the dye. The reasons for adding this dye instead of less compatible dyes is found the following paragraphs in Nakamura:

> Field of the Invention
>
> **[0001]** The present invention relates to a positive or negative image-formation material which can be recorded image-wise by exposure to an infrared laser and in which solubility of a recording layer at exposed portions changes, and to an infrared absorber which can be suitably used in the image-formation material. More particularly, the present invention relates to an image-formation material with an infrared layer, which can be recorded by exposure to an infrared laser or the like in the near-infrared range, and particularly which is suitable for a planographic printing plate used for so-called direct plate formation which can provide plate formation directly from digital signals of computers and the like, and to an infrared absorber having a surface orientation group, which absorber is suitable for application in the image-formation material.

[0006] Regarding image-forming properties of the above-mentioned various recording materials, there is a problem in that, although energy sufficient for an image formation reaction is obtained at the surface of a sensitive material irradiated by a laser, thermal diffusion to a substrate is extensive, due to excellent thermal diffusion, and particularly due to excellent heat conductivity when a generally-used aluminum substrate is used as the substrate. Consequently, energy is not sufficiently utilized for forming images, leading to low sensitivity. With this problem, a sufficient effect of reducing suppression of dissolution or an effect of promoting a reaction by polymerization may not be obtained in deep portions of the sensitive material. Consequently, the occurrence of alkali development at exposed portions/non-exposed portions may not be fully realized, such that excellent images cannot be obtained, and furthermore, developing latitude, that is, tolerable range which can afford good image-formation when concentration of an alkaline developing solution is varied, is narrow.

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[0007] Therefore, an object of the present invention is to provide an image-formation material having high sensitivity and excellent image-forming property, and a novel infrared absorber which can be suitably used in this material.
[0008] The present inventor has intensively studied for the purpose of improving sensitivity and image-forming property of image-formation materials, and has consequently found that both sensitivity and image-forming property can be improved by using an infrared absorption agent having a specific substituent. Further, the inventor has found a novel infrared absorber that can be suitably used in this agent, leading to completion of the present invention.
[0009] That is, the image-formation material of the present invention is a heat mode-applicable image-formation

material, the image-formation material having: a substrate; and an image-formation layer on the substrate which contains an infrared absorption agent having at least one surface orientation group in a molecule thereof, solubility of the image-formation layer in an alkaline aqueous solution being changeable by action of near-infrared range radiation.
[0010] Here, in a preferable embodiment, the above-mentioned infrared absorption agent is an infrared absorber having at least one surface orientation group selected from fluorine-containing substituents and long chain alkyl groups.
[0011] Further, the infrared absorber of the present invention is characterized in that it has in the molecule a fluorine-containing substituent having at least 5 fluorine atoms.

[0025] Although action of the present invention is not clear, it is believed that by using an infrared absorber which manifests absorption in the near-infrared range and has a surface orientation group as the infrared absorption agent to be used in the image-formation material of the present invention, an infrared absorption agent is localized on the outermost surface (air interface) of a photosensitive layer. Thus, diffusion of heat generated near the surface into a substrate is suppressed, and the generated heat is utilized efficiently for forming images. Consequently, an increase in sensitivity can be attained.
[0026] Further, from the investigations of the present inventor, it is apparent that when a resin layer containing an infrared absorber having a surface orientation group is irradiated by an infrared laser, the surface contact angle of the resin layer increases. Resultantly, in the image-formation material of the present invention, permeability of a developing solution at exposed portions of the image-formation layer lowers. Therefore, particularly in the case of use as a negative

recording material, there is also a benefit in that discrimination can be expanded.

Thus, with respect to instant claims 1-3, 5-10, 12-13, 15-16, 18-20, 22-23, 25-26, and 28-29, the use of the perfluorinated infrared absorbers of Nakamura as the IR absorbers of Vermeersch et al would have been prima facie obvious to suppress the heat diffusion near the surface of the printing plate surface thus using the generated heat more efficiently for forming images and consequently getting an increase in sensitivity and the oleophilic nature of the fluoro groups would have been attracted to the siloxane structure. The specific examples of Nakamura's dyes are found on pages 7-11. In Vermeersch et al, see abstract, [0015, 0020-0027]

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[0009] That is, the image-formation material of the present invention is a heat mode-applicable image-formation

material, the image-formation material having: a substrate; and an image-formation layer on the substrate which contains an infrared absorption agent having at least one surface orientation group in a molecule thereof, solubility of the image-formation layer in an alkaline aqueous solution being changeable by action of near-infrared range radiation.
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[0011] Further, the infrared absorber of the present invention is characterized in that it has in the molecule a fluorine-containing substituent having at least 5 fluorine atoms.

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Thus, with respect to instant claims 1-3, 5-10, 12-13, 15-16, 18-20, 22-23, 25-26, and 28-29, the use of the perfluorinated infrared absorbers of Nakamura as the IR absorbers of Vermeersch et al would have been prima facie obvious to suppress the heat diffusion near the surface of the printing plate surface thus using the generated heat more efficiently for forming images and consequently getting an increase in sensitivity and the oleophilic nature of the fluoro groups would have been attracted to the siloxane structure. The specific examples of Nakamura's dyes are found on pages 7-11. In Vermeersch et al, see abstract, [0009, 0013-0020, 0031, 0035].

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Farid et al (4,743,530) teach the general compatibility in oleophilic layers of the perfluorinated counter-ion in col. 11, lines 11-31 when dealing with absorbing dyes. Bailey et al (6,040,115) in col.co. 15 disclose an infrared dye reading on the instant dyes but makes use of it in a single layer system with an ink repellant layer. Kawauchi et al (2003/0129532) teach using fluorinated surfactants in multilayered printing plates imaged via heating.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Hamilton whose telephone number is 571-272-1331. The examiner can normally be reached on Monday through Friday 9:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H Kelly can be reached on (571) 272-0729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cynthia Hamilton
Primary Examiner
Art Unit 1752

CYNTHIA HAMILTON
PRIMARY EXAMINER

March 20, 2005